GiPSi

V1.6 User Manual

3 oz palm-sized self contained navigation panel
and information GPS, using audio directions controlled
with a single joystick

Thank you for choosing the GiPSi, a portable Global Positioning System (GPS) device for pilots, from GiPSi Navigation.

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WARNINGS

The Global Positioning System (GPS) is designed and maintained solely by the United States government, which is solely responsible for its accuracy and maintenance. The government's system is subject to changes which could affect the accuracy and performance of all GPS equipment, including the GiPSi. The GPS is only one tool to be used in navigation. GiPSi gets its information from the GPS system and cannot control its accuracy, therefore, be aware that all data may contain inaccurate or incomplete data to some extent.

The GiPSi is a navigational aid. The GiPSi is designed to provide you with route suggestions, but it is not intended to replace other sources of navigational information. The GiPSi is designed as an aid to VFR navigation only. Please cross check all information which it provides and always use your own judgment as to the correctness of the information.

HOW DOES GIPSI WORK?

Using GPS Technology and FAA Databases it can locate up to 100 of the NEAREST runways and verbally direct you to them with runway Bearing, Distance, Altitude, Runway Length and Estimated Time of Arrival.

GiPSi can issue altitude, speed and track advisories based on preset thresholds deviations. GiPSi can direct you along a list of WAYPOINTs (ICAO identifiers e.g. KSFO) loaded from a PC. GiPSi can capture 2000 fixes (stored LAT/LON, ALT, GROUND SPEED, NEAREST when you press store) which you can upload to your computer, or have the GiPSi direct you to.

GIPSI PHYSICAL SETUP

You Do This	Additional Details
Remove GiPSi & ear bud from zipper case.	Take out the operations schematic at the same time.
Insert ear bud plug in GiPSi 3.5mm socket. For preliminary testing. You may later use any MP3 type device. The GiPSi outputs sound on the RIGHT channel of a stereo plug or a mono device like the ear bud.	If you elect to use the ear bud in flight please note that it does NOT have to be in your ear. It can sit anywhere inside your ear phone cup. Optionally you may attach the included 3.5MM cable from the GiPSi to another device. Many planes have a XM, CD, or other player hook up to their audio panel. The GiPSi will work fine with this. Additionally some headphones (Pilot PA-1169T or A-1171T) have 3.5mm sockets for sound input. All Pilot headsets are available from GiPSi Navigation. The cable from GiPSi to headset is included.

BATTERY CHARGING

Hook the USB connector from the attached transformer to the wall or to a PC USB port. To fully charge the GiPSi battery takes 2.5 hours. A one hour charge will run the GiPSi for 3 hour.

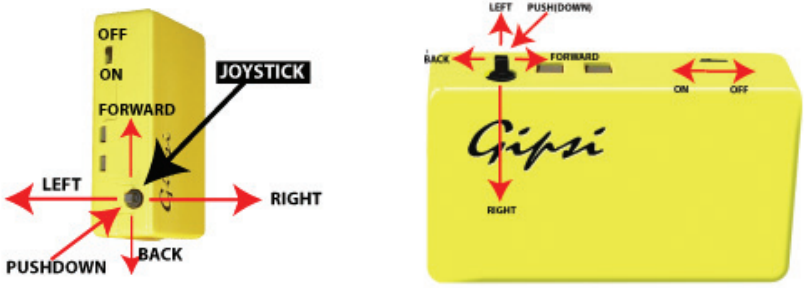
The GiPSi uses a Lithium Ion battery. Battery life is 10+ hours with a full charge. The GiPSi can be used while it is recharging.

GiPSi MOUNTING OPTIONS

Velcro Option Attach to Headset, Window, Dash, or Yoke	
Strap Option Attach to yoke, Handle, or Visor	

STARTING THE GiPSi

(See schematic page for pictoral commands)



(GiPSi Speech Responses are Bold Like This)

You Do This	GiPSi Does This
Push Slide switch toward Control Button (It may be necessary to move the GIPSI near a window or outside to achieve a satellite fix.) It may take up to 15 minutes in new location	Various flashing sequences for 15 seconds. See LED LEGENDS. GiPSi announces battery life remaining and versions. **One one point three hours remaining, GiPSi VERSION ZERO NINER ZERO THREE TWO THREE POINT ZERO TWO ZERO NINER.** The last number 0209 indicates the NACO Database is from Feb, 2009
(When LED closest to on/off switch goes Green, the GPS has a lock.)	SAT ACQUISITION AT ONE EIGHT ONE FIVE ZULU

General Command – Mute

To quiet the GiPSi at ANY time, push the joyswitch down for more than 2 seconds.

General Command – VOLUME (QUICK PUSH LEFT AND RIGHT)	
Push, for less than 1/2 second, RIGHT for louder, LEFT for softer. Volume ranges from 1 to 6.	If GiPSi is speaking, then sound will get louder or softer. If not currently speaking, then: **VOLUME-ONE, ….VOLUME-SIX (full volume)**

Navigation Command – NEAREST (ONE PUSH DOWN)	
Push DOWN once	**NEAREST** ONE, PAPA ALPHA OSCAR BEARING ZERO SEVEN SIX DEGREES, 5 DEGREES RIGHT *,DISTANCE THREE POINT SIX MILES,RUNWAY LENGTH, 24 HUNDRED FEET *only if moving> 5MPH and tracking data valid

Navigation Command – NEAREST (ONE PUSH DOWN) cont.	
OPTIONS: push FORWARD for next closest runway. Or push BACK for previous runway. Up to 100 runways. Push DOWN or another command to exit NEAREST	NEAREST TWO, KSQL BEARING 300 SIX, 5 DEGREES RIGHT *, DISTANCE 4.1 MILES, RUNWAY LENGTH 26 HUNDRED FEET *only if moving> 5MPH and tracking valid satellites

Navigation Command – WAYPOINT (TWO PUSHES DOWN)	
Press Down twice, WAYPOINT (personal flight plan). WAYPOINTS Loaded via USB cable from GiPSi Control Program.	**WAYPOINT ONE, KTRK, BEARING 025, DISTANCE ONE FOUR SEVEN MILES.** *only if moving> 5MPH and tracking valid
OPTIONS: push FORWARD for next closest runway. Or push BACK for previous runway. Up to 25 runways	Presentation same as NEAREST

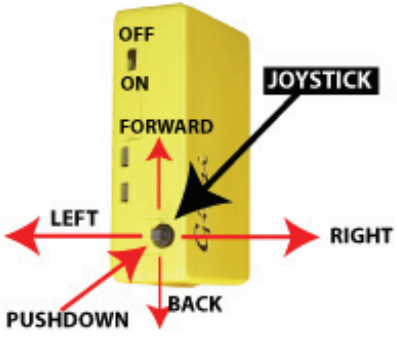
Navigation Command – LOGPOINT (THREE PUSHES DOWN)	
Press Down three times.	**12 LOGPOINTS.** Directions are given to LOGPOINT #1. Press FWD to go to the next LOGPOINT, BACK to go to previous LOGPOINT.
Press BACK when at the first log point	Records current LAT/LON in Flash memory
NOTE: GiPSi records a log point when you DEPART, defined as speed exceeding 30 KTS and records an ARRIVAL when your speed goes below 30KTS. These may be retrieved via the USB to your PC, including LAT/LON, DATE, TIME(Z), SPEED, ALTITUDE	

Special Command – DME (PUSH RIGHT)	
Press RIGHT in any mode This will announce distance on any distance deviation of greater than 0.2 miles.	**KILO PAPA ALPHA OSCAR THREE POINT SIX DME** This will announce your distance in nautical miles from the current NEAREST Airport selected. This command is useful for keeping out of controlled airspace.

Special Command – WHERE (PUSH LEFT)	
Press LEFT in any mode. Useful if you need to advise ATC of your location and you don't have a good fix.	**WHERE, 3.6 MILES WEST OF KILO PAPA ALPHA OSCAR.**

Special Command – PANEL (FOUR PUSHES DOWN)	
Note: Panel reports will turn on "PANEL-ON" the first time you enter it and turn reports off "PANEL-OFF" the next time you enter it. GIPSI WILL UPDATE THE PANEL INFORMATION ONLY ON DEVIATIONS GREATER THAN THRESHOLDS. DEVIATIONS ARE 100FT FOR ALTITUDE, 1 MILE FOR DISTANCE, OR 5 DEGRESS TRACK CHANGE .	If moving: **TRACK 035 DEGREES.** If moving: **GROUNDSPEED ONE FIVE FIVE KNOTS** If 3D fix: **ALTITUDE THREE ZERO FIVE FEET** **ONE FIVE SEVEN SEVEN ZULU**

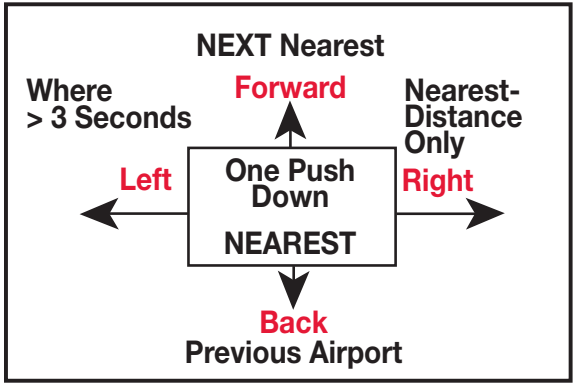
OPERATIONS SCHEMATIC

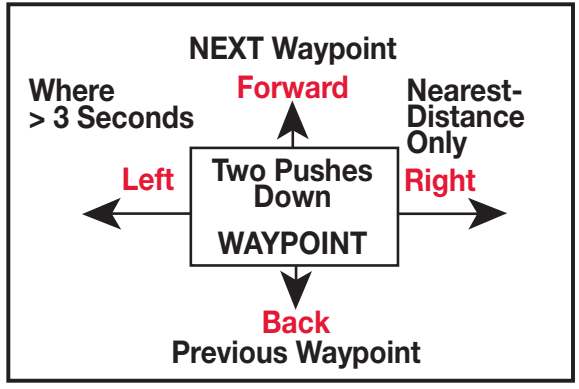


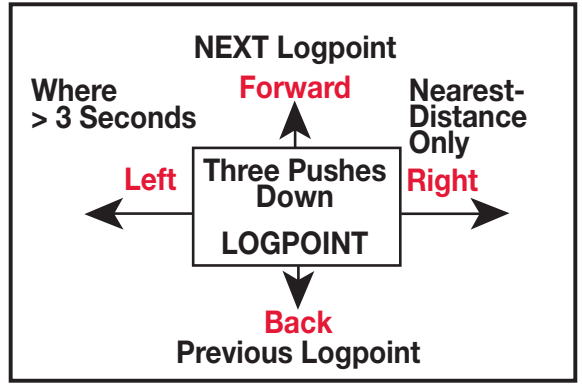
All GiPSi Functionality is controlled by the Joystick

Starting GiPSi

Slide on/off switch toward joystick. GiPSi will speak version & battery life remaining. After Satellite Fix is acquired, push down 1, 2 or 3 times for each Main Function. To turn off any Navigation command, repeat previous push or a different command.







MUTE

PUSH DOWN for more than 2 seconds
GiPSI respond with a "MUTE" if not speaking.

DISTANCE ONLY

Distance finction advises distance to most recent Nearest Airport in all navigation functions.

VOLUME Control

LEFT for softer **RIGHT** for louder, less than 2 seconds in Nearest, Waypoints and Longpoints.

WHERE FUNCTION

LEFT anyime to hear
Current location relative to nearest runway.

PANEL Function → four PUSHES
(Backup Replacement for your Panel)
GiPSi will advise & update
1) Ground Track (Magnetic Degrees)
2) Ground Speed in knots
3) Current Altitude in Feet
4) Current Zulu Time

SEE Manual for additional Commands:

1) Options
2) Status

LED LEGENDS

LED 1 (CLOSEST TO SLIDE SWITCH)	
Solid RED and Solid Green on start	Boot loader waiting 10 seconds
Solid Red and solid Red flashing on start	GPS chip not communicating with controller
Flashing green on start	GiPSi initialization GPS is communicating with controller and controller building airport index
Orange flashing & led 2 orange flashing	Charging, GPS inactive
Red Flashing	Using last fix. GiPSi will advise you when button pressed.
Red Solid	No fix
Green flashing	2d navigation (no altitude)
Green solid	3d navigation (altitude & accurate to 30ft)
Orange flashing	Data from stored location, no current fix
Red flashing & led 2 red flashing	GPS failure

LED LEGENDS

LED 2 (CLOSEST TO COMMAND BUTTON)	
Solid Orange on start	Battery dead, Charging
Flashing green on start	GiPSi initialization
Orange flashing & led 1 orange flashing	Charging, GPS inactive
Red flashing	NA
Red	Less Than 10% battery life remaining
Green flashing	25% to 75% battery life remaining
Green	More Than 75% battery life remaining
Orange	Less Than 25% battery life remaining
Red flashing & led 1 red flashing	GPS failure
Red flashing & led 2 red flashing	GPS failure

GiPSi

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